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**United States Patent** [19][11] **Patent Number:** **5,491,507****Umezawa et al.**[45] **Date of Patent:** **Feb. 13, 1996**[54] **VIDEO TELEPHONE EQUIPMENT**

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2659514	9/1991	France	379/433
60-21636	2/1985	Japan	
61-104653	7/1986	Japan	
1-120159	5/1989	Japan	379/433
774750	8/1989	Japan	
1-227555	9/1989	Japan	379/434
3-109891	5/1991	Japan	H04N 7/14
3-162024	7/1991	Japan	455/89
4-117849	4/1992	Japan	
8909524	10/1989	WIPO	379/433

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[51] Int. Cl.<sup>6</sup> ..... **H04M 11/00**[52] U.S. Cl. .... **348/14**; 379/433; 379/58[58] **Field of Search** ..... 379/433, 434,  
379/93, 96-99, 90, 110, 58, 61; 455/89,  
90; 348/14, 20; H04N 7/12, 7/14[56] **References Cited****U.S. PATENT DOCUMENTS**

D. 297,734	9/1988	Soren et al.	
D. 297,735	9/1988	Soren et al.	
3,233,346	2/1966	Cornberg	348/14
4,796,288	1/1989	Busche et al.	379/433
5,151,946	9/1992	Martensson	379/433
5,177,784	1/1993	Hu et al.	379/433
5,280,524	1/1994	Norris	379/430

**FOREIGN PATENT DOCUMENTS**

0492748 7/1992 European Pat. Off. .... 379/433

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[57]

**ABSTRACT**

A handy type video telephone equipment which permits a user to transmit and receive pictures and speech with a casing held in one hand. A speaker is arranged at the upper end part of the front of the casing which is thin and vertically long, while a microphone is arranged at the lower end part thereof. A display panel and a control panel are interposed between the speaker and the microphone. A camera is mounted on the casing so as to be capable of altering its angle. The speaker is detachably mounted, and it is usable as an earphone when detached. The user's movements are not hampered during the transmission and reception, and the equipment can assume various communication or service attitudes conforming to the contents of information for the communications.

**12 Claims, 23 Drawing Sheets**